

July 3, 1980

City Hall 830 Boonville Avenue Springfield, Missouri 6580 2 417-865-1611

Mr. Leo A. Stotts 2105 Valley Road Springfield, MO 65804

Dear Mr. Stotts:

This is with reference to our telephone conversation earlier this week and a subsequent meeting of Mr. Randall Lyman of the Department of Public Works and yourself on Thursday, July 3, 1980.

When you called earlier in the week you advised the storm drain and ditch which crosses under Valley Road just north of Kirkwood was carrying water twice daily and that it was red in color. You further stated you were concerned about this, and that possibly something was entering the storm sewer system that should not be. You previously mentioned a concern about the new insurance building and later in this letter I will respond to that particular statement.

Mr. Lyman has reported back to me concerning his conversation with you, and his subsequent review of the situation. He advised that he felt you were very disturbed about his conversation with you due to the fact that this gentleman, probably unknown to you, has absolutely nothing to do with storm sewer problems. He is a Water Pollution Control Inspector and one of his duties is to determine if an illegal source of water is entering our storm sewer system. He and I both are sorry that he could not convey this to you, but in any event, he did go to the new insurance complex on Sunshine and did find that they have a direct connection to the storm sewer which connects to a water well that they drilled for irrigating their lawn and shrubs. This overflow is a safety device to protect their system should too much pressure be created during the time of irrigation. The system eventually is to be sophisticatedly run by a computer to irrigate their lawn and shrubs. At the present time it is done manually and because it is done manually, they must override the safety device and allow water to drain into the storm sewer from this well while they irri-This well water has no detrimental side effects and may legally be put into our storm sewer system. Once they get their computerized system on line and once they get a stand of grass and we get through this

horrible summer heat, this pressure relief overflow will probably diminish to little, if any, water being discharged.

We have determined the redness is actually the cleaning out of the storm sewer of silted red clay which I am sure got into the storm sewer when this project was under construction. Mr. Lyman advised me this morning's water was definitely clearing up, and that he found the siltation at the open end of the storm sewer in the ditch of the silted red clay.

Now, I would like to discuss briefly storm sewer runoff from this new insurance complex. First of all, when that was a Drive-In Theatre all storm water runoff followed the exact same path then as it does now. As I told the residents in November of 1978 and again in October of 1979, this insurance complex would be required to detain on their property all excess runoff over and above what would normally run off in its prior condition. This has been accomplished. The insurance complex has spared no expense in this regard. They have designed the most elaborate detention system in the City of Springfield. It is a series of large underground pipe connected to the State Highway Department's storm sewer system which in turn is connected to a private storm sewer system on Prairie Lane, this in turn connects to the public storm sewer, "an open ditch", on Valley Road.

The confusion that I find in speaking with many people about storm water is what is meant by the word detention. If I may, I would like to give a very simple example of what we are talking about. Let us take the insurance complex as our example. Before they built let us say a 2" rain developed 5,000 gallons of water that ran off the property, and it ran off at a rate of 50 gallons a second. When the land is determined to be developed, calculations are made as to how many gallons of water will now run off based upon their development. Now just for the sake of explanation (these figures are by no means in any way accurate, but are meant to show a point) let us say the insurance company when it gets built, a 2" rain creates 10,000 gallons of water that will run off. We advised them that they must detain the extra 5,000 gallons of water and that they cannot release that water of a rate greater than 50 gallons per second. Now these figures were not used, but I hope show what is meant by detention. As you can see, before the insurance building went in if 5,000 gallons ran off at 50 gallons per second, it would take 100 seconds to drain the area. If the new insurance building creates 10,000 gallons but we will not allow it to leave the property at a speed greater than 50 gallons per second, it will then take 200 seconds to drain the area. The important thing is that the volume of water of 50 gallons per second does not change.

I hope I have helped explain what has taken place and I think the bottom line is the storm drain at Prairie Lane as well as the open ditch on Valley Road, which is also a part of the storm sewer system, is inadequate for much of the storm sewer runoff that these facilities serve. There is no doubt that we need to improve the capacity of many storm sewers, and we will continue to try to find a solution to this particular problem and others in the City as this Department and your City Government realizes the need to continue to improve our storm sewer carrying capacity.

Very truly yours,

David G. Snider, P.E. Director of Public Works

DGS/ec

cc: Don Busch, City Manager
George Scruggs, City Councilman
Randall Lyman